DevOps Working Group

Thursday April 18, 2019
# Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Owner</th>
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</thead>
<tbody>
<tr>
<td>30 min</td>
<td>Discussion: Security Tooling for Jenkins CodePipeline</td>
<td>Trevor Conn with Guest Speaker: Dee Annachhatre / NVIDIA</td>
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<tr>
<td>10 min</td>
<td>Work Review (GitHub Project)</td>
<td>James Gregg</td>
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<tr>
<td>2 min</td>
<td>Backlog Review</td>
<td>James Gregg</td>
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<tr>
<td>10 min</td>
<td>Ci-management for Snap discussion</td>
<td>Ian Johnson</td>
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<td>Opens</td>
<td>All</td>
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Attendees: James, Jeremy, Trevor, Dee, Jessica, Ernesto, Ian, Andy Foster, Jim, Eric, Vishwas, Walt, Bryon, Colin, Brandon, Lenny, Toby, Andy Davies, Lisa
## Attendees

### Meeting Participants

<table>
<thead>
<tr>
<th>Name (Original Name)</th>
<th>User Email</th>
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<tbody>
<tr>
<td>James Gregg (Intel)</td>
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<tr>
<td>jphelps</td>
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<td>Trevor Conn</td>
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<td>Jim White</td>
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<td>Bryon Nevis (Intel)</td>
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<td>Walt (Intel)</td>
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<td>Vishwas (Intel)</td>
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<td>Dee</td>
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<td>Jessica Butler (NVIDIA)</td>
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<td>Call-In User_1</td>
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### Meeting Participants

- Us1kDG1of2junFieOhux2...
- Ernesto - Intel
- Brandon Forster
- Eric Ball - Linux Foundation
- Lenny Goodell (Intel)
- Toby Mosby (Intel) (Toby ...)
- ajdavies
- Lisa Ranjbar (inte)
- Andrew Foster
- Colin Hutchinson
Security Tooling for Jenkins CodePipeline Discussion

Guest Speaker: Dee Annachhatre / NVIDIA
Discussion

• OS scan = Open Source scan

• Shift Left – SDL starts at the design / architecture phase of project

• NVIDIA Security team makes Security Services an offering to developers with options to integrate via REST or Docker

• Tools made available to development teams post registration
Discussion
Next Steps

• Take a look at additional tools which might be options for consideration for EdgeX Jenkins integration with focus on FOSS
  • WhiteSource
  • Coverity

• Thank you Dee and Jessica for sharing your presentation and helping frame the dialog for consideration of OSS Tooling within the Jenkins CI/CD Pipeline
<table>
<thead>
<tr>
<th>Helpdesk Ticket #</th>
<th>Description</th>
<th>Details</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>69830</td>
<td>codecov.io config needed for edgex-go repo</td>
<td>Eric Ball follow up with the team that owns VEXHOST – no progress Issue is with building new arm images – doesn’t affect edgex builds decision to leave it open for now. Circle back with VEXHOST team</td>
<td>WIP</td>
</tr>
<tr>
<td>68377</td>
<td>failed job related to timeout waiting for SSH</td>
<td>Issue is with building new arm images – doesn’t affect edgex builds decision to leave it open for now. Circle back with VEXHOST team Possible look at using a different OS for the builds</td>
<td>WIP</td>
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<tr>
<td>70612</td>
<td>EdgeX ARM Builds</td>
<td>EdgeX Jenkins builds for ARM take twice as long if not more than x_86 ARM builds fail with “no manifest” error</td>
<td>Closed</td>
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<tr>
<td>69422</td>
<td>need to extend sigul to include additional functionality</td>
<td>sigul enhancements included in release last Thursday LFTOOLS release v0.23.1 Dockerized image with sigul</td>
<td>Closed</td>
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<tr>
<td>Helpdesk Ticket #</td>
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<td>Status</td>
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| 69600             | jenkins docs job fails for /edgex-go-docs-delhi-stage-docs lftools: command not found | Broken Builds for Delhi Documentation – as reported by Michael Hall – ISSUE identified with lftools – Still seeing issues as of 3/20/19  
Decision: Root Cause Analysis – plan to have this fixed with release for next Thursday  
Help Needed – Works in Sandbox but not production - needs an extra set of eyes to look at this issue. Eric needs some help from LF team. Needs to check init scripts – didn’t fix it.  
Latest error: 401 errors from lftools upload to nexus | Closed |
Backlog Review
Performance Testing

Parallel Processing where 3 nodes are spawned from the Pipeline – each pulling down Edgex stack and performing the jmeter test scripts.
Meeting Minutes

• SPIKE on Image Scanning tools in Progress – Clair / Klar
• Performance Testing – Sandbox job implemented by IoTech team using Jenkins Pipeline – Good Job!
  • Need to investigate performance issues observed from Grafana dashboard
    • Unable to fetch data using Docker Metrics per container with Host
    • It would be helpful to see how IoTech configured their dashboard to work within their build environment so we can compare the configuration with the Linux Foundation implementation
• Snap discussion
  • Jim will add a note to include this topic along with the discussion around multiple orchestration mechanisms for upcoming F2F in Seoul
Fuji Planning

Scope Discussions
Proposed Fuji – Test/QA/Documentation

In
• More unit tests everywhere (better coverage)
• More black box tests
• Automated system level latency and throughout testing (e.g. device read to export or device read to analytics to device actuation)
• Automated Device Service testing (functional and performance for each Device Service e.g. Modbus DS)
• Propose additions???
• - performance testing

Out
• Configuration testing
  • Existing testing uses a single static configuration
  • Need to identify and add additional testing configurations to automated blackbox testing
• Tracing
  • During testing, configuration
  • Candidate tools/technology based on OpenTracing standard: Zipkin, Jaeger
• Propose additions???
Fuji Planning – DevOps

In
- Static code analysis tool identified and integrated into the EdgeX Jenkins Pipeline
- Code and artifact signing with semantic versioning
- Fix Documentation – edgex-go
- Build Performance Optimizations
  - Pipelines for EdgeX Foundry base build images
  - Basebuild images managed locally within Nexus
  - Leverage PyPi Proxy for local pip dependencies
  - ARM builds – optimization leveraging different high CPU build nodes / OS (ARM Team)

Out
- Alternate deployment/orchestration
  - Beyond Docker/Snaps
  - Kubernetes
  - Kata Containers
  - …
- SonarQube – SonarCloud is already in play in the LF
  Decision: wait to see what codecov.io offers
- Suggestion to rename all of the Jenkins “arm” jobs so as to differentiate 32bit / 64bit architectures
- Full Pipeline transformation for EdgeX services
Backlog Review

• What else do we need to consider?
  • Backlog review
    • https://wiki.edgexfoundry.org/display/FA/Backlog
  • Edinburgh Roadmap review (what did we not get done)
    • https://wiki.edgexfoundry.org/display/FA/Edinburgh+Release

• New additions/opens
  • DevOps Backlog
    • https://github.com/edgexfoundry/ci-management/projects/2
Edinburgh Release

Release Planning
Edinburgh Dates

• Freeze Date – May 28
• Release Date – June 20
## Future Agenda Topics

<table>
<thead>
<tr>
<th>WW14</th>
<th>Documentation migration – edgex-go user documentation</th>
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<tbody>
<tr>
<td>WW14</td>
<td>Topics for Fuji F2F</td>
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<td>Jenkins Pipelines for EdgeX services</td>
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<td>WW15</td>
<td>Review Aqua Microscanner – Image scanning tool for Vulnerabilities</td>
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<td>WW16</td>
<td>NVIDIA – Security tooling within CodePipeline (Trevor request) 4/18/19</td>
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<td>WW17</td>
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<td>WW18</td>
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<td>Athens Project – proxy server for go package dependencies</td>
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<td>Community Involvement</td>
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EdgeX DevOps Discussion
Future Roadmapping

Beyond Fuji
Future Roadmaps

• What moves to Geneva
  • What’s the major theme(s) for spring release
• Do we have plans for Hanoi
• What are some big rocks we want to set out as markers for the next few releases